Index of Authors

ALBERTI, K. G. M. M. *see* BLACKSHEAR, P. J. 379–387
ARDAILLOU, R. *see* LOREAU, N. 305–314
ARNSTEIN, H. R. V. *see* BUTLER, M. 419–432
ASHBY, J. P. & SPEAKE, R. N. Insulin and glucagon secretion from isolated islets of Langerhans. The effects of calcium ionophores 89–96
AVI-DOR, Y. *see* DAVID, M. 405–411; SHKEDY-VINKLER, C. 219–226

BÄCHI, B. & KORNBERG, H. L. Utilization of gluconate by *Escherichia coli*. A role of adenosine 3′:5′-cyclic monophosphate in the induction of gluconate catabolism 123–128
BADAWY, A. A.-B. & EVANS, M. The regulation of rat liver tryptophan pyrrolase by its cofactor haem. Experiments with haematin and 5-aminolaevulinate and comparison with the substrate and hormonal mechanisms 511–520
BAISTED, D. J. *see* FANG, T.-Y. 323–328
BAKER, B. *see* TATA, J. R. 345–355
BALLARD, F. J. *see* GUNN, J. M. 195–203
BARRITT, G. J. *see* DORMAN, D. M. 389–395
BAUDHUIN, P. *see* PEETERS-JORIS, C. 31–39
BEATTY, B. G., MAK, W. W.-N. & WONG, J. T.-F. Regulation of synthesis of ribosomal proteins during pyrimidine starvation in *Escherichia coli* 463–468
BILODEAU, J.-L. *see* JOTHY, S. 133–135
BIRT, L. M. *see* CAMPBELL, A. J. 227–234
BLACK, E. *see* TAVILL, A. S. 495–509
BLACKSHEAR, P. J., HOLLOWAY, P. A. H. & ALBERTI, K. G. M. M. Factors regulating amino acid release from extrasplanchnic tissues in the rat. Interactions of alanine and glutamine 379–387
BLAMEY, R. W. *see* POWELL-JONES, W. 71–75
BLASS, J. P. *see* JOPE, R. 397–403
BOFFEY, S. A. & NORTHCOTE, D. H. Pectin synthesis during the wall regeneration of plasmolysed tobacco leaf cells 433–440
BRAGG, P. D. *see* KAY, W. W. 21–29
BRATTSTEN, L. B. & WILKINSON, C. F. Properties of 5-aminolaevulinate synthetase and its relationship to microsomal mixed-function oxidation in the southern armyworm (*Spodoptera eridania*) 97–104
BREMER, H. & DALBOW, D. G. Regulatory state of ribosomal genes and physiological changes in the concentration of free ribonucleic acid polymerase in *Escherichia coli* 9–12
BREMER, H. & DENNIS, P. P. Gene activities for ribosomal components in *Escherichia coli* B/r 469–475
BREMER, H. *see also* DALBOW, D. G. 1–8
BROWN, R. H. *see* COLLINS, N. 373–377
BROWN, S. B. & KING, R. F. G. J. An ^{18}O double-labelling study of haemoglobin catabolism in the rat 565–567
BUNTING, S. *see* SWANN, P. F. 335–344
BURNELL, J. N., JOHN, P. & WHATLEY, F. R. The reversibility of active sulphate transport in membrane vesicles of *Paracoccus denitrificans* 527–536
BUTLER, M., DARBRE, A. & ARNSTEIN, H. R. V. Amino acids attached to transfer ribonucleic acid *in vivo* 419–432

Vol. 150

BUTTERS, T. D. & HUGHES, R. C. Surface labelling of human tumour KB cells. Iodination and fractionation of membrane glycoproteins 59–69
BYGRAVE, F. L. *see* DORMAN, D. M. 389–395

CAMPBELL, A. J. & BIRT, L. M. The effect of inhibitors *in vivo* on protein synthesis and the amino acid pool in the sheep blowfly, *Lucilia cuprina* 227–234
CARSON, E. R. *see* TAVILL, A. S. 495–509
CHAMPSAUR, H. *see* JOTHY, S. 133–135
CHESTERS, J. K. Comparison of the effects of zinc deprivation and actinomycin D on ribonucleic acid synthesis by stimulated lymphocytes 211–218
CLIFTON, G., KAPLOWITZ, N., WALLIN, J. D. & KUHLENKAMP, J. Drug induction and sex differences of renal glutathione *S*-transferases in the rat 259–262
CLOTSCHER, W. P. *see* COOKE, B. A. 413–418
COLBY, J. & ZATMAN, L. J. Regulation of citrate synthase activity in methylotrophs by reduced nicotinamide–adenine dinucleotide, adenine nucleotides and 2-oxoglutarate 141–144
COLLINS, N., BROWN, R. H. & MERRETT, M. J. Oxidative phosphorylation during glycollate metabolism in mitochondria from phototrophic *Euglena gracilis* 373–377
COOKE, B. A., JANSZEN, F. H. A., CLOTSCHER, W. F. & VAN DER MOLEN, H. J. Effect of protein-synthesis inhibitors on testosterone production in rat testis interstitial tissue and Leydig-cell preparations 413–418
COOPER, P. H. & HAWTHORNE, J. N. Phosphomonoesterase hydrolysis of polyphosphoinositides in rat kidney. Properties and subcellular localization of the enzyme system 537–551
COORE, H. G. *see* TITHERADGE, M. A. 553–556
COX, R. B. & QUAYLE, J. R. The autotrophic growth of *Micrococcus denitrificans* on methanol 569–571

DALBOW, D. G. & BREMER, H. Metabolic regulation of β-galactosidase synthesis in *Escherichia coli*. A test for constitutive ribosome synthesis 1–8
DALBOW, D. G. & YOUNG, R. Synthesis time of β-galactosidase in *Escherichia coli* B/r as a function of growth rate 13–20
DALBOW, D. G. *see also* BREMER, H. 9–12
DARBRE, A. *see* BUTLER, M. 419–432
DAVID, M. & AVI-DOR, Y. Stimulation of protein synthesis in cultured heart muscle cells by glucose 405–411
DAVIES, P. *see* POWELL-JONES, W. 71–75
DAVIES, R. C. *see* SANDY, J. D. 245–257
DAWSON, R. M. C. *see* HAZELWOOD, G. P. 521–525
DEL FAVERO, A., GAMULIN, S., GRAY, C. H. & NORMAN, M. R. Ribosome function in livers of porphyric mice 573–576
DELVALLE, J. A. *see* MACDONNELL, P. C. 269–273
DENNIS, P. P. *see* BREMER, H. 469–475
DOCTER, R. *see* VISSER, T. J. 489–493
DONALDSON, L. J. *see* FULLER, D. J. M. 557–559
DORMAN, D. M., BARRITT, G. J. & BYGRAVE, F. L. Stimulation of hepatic mitochondrial calcium transport by elevated plasma insulin concentrations 389–395

DRUMMOND, A. H. & GORDON, J. L. Specific binding sites for 5-hydroxytryptamine on rat blood platelets 129–132

ERFLE, J. D. *see* SAUER, F. D. 357–372
EVANS, M. *see* BADAWY, A. A.-B. 511–520

FANG, T.-Y. & BAISTED, D. J. 2,3-Oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase activities *in vivo* in the cotyledon and axis tissues of germinating pea seeds 323–328
FULLER, D. J. M., DONALDSON, L. J. & THOMAS, G. H. Ornithine decarboxylase activity and [^{125}I]iododeoxyuridine incorporation in rat prostate 557–559

GAITONDE, M. K. Conversion of [U-^{14}C]threonine into ^{14}C-labelled amino acids in the brain of thiamin-deficient rats 285–295
GAMULIN, S. *see* DEL FAVERO, A. 573–576
GARLICK, P. J. *see* MILLWARD, D. J. 235–243
GOODMAN, M. N. Effect of 3-mercaptopicolinic acid on gluconeogenesis and gluconeogenic metabolite concentrations in the isolated perfused rat liver 137–139
GORDON, J. L. *see* DRUMMOND, A. H. 129–132
GRAY, C. H. *see* DEL FAVERO, A. 573–576
GREENGARD, O. *see* MACDONNELL, P. C. 269–273
GRIFFITHS, K. *see* POWELL-JONES, W. 71–75
GUNN, J. M., HANSON, R. W., MEYUHAS, O., RESHEF, L. & BALLARD, F. J. Glucocorticoids and the regulation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in the rat 195–203

HANNAH, R. & SAHIB, M. K. Stabilization of rat liver tyrosine aminotransferase by tetracycline 329–333
HANSON, R. W. *see* GUNN, J. M. 195–203
HAWTHORNE, J. N. *see* COOPER, P. H. 537–551
HAZLEWOOD, G. P. & DAWSON, R. M. C. Intermolecular transacylation of phosphatidylethanolamine by a *Butyrivibrio* sp. 521–525
HEMS, D. A., RATH, E. A. & VERRINDER, T. R. Fatty acid synthesis in liver and adipose tissue of normal and genetically obese (*ob*/*ob*) mice during the 24-hour cycle 167–173
HEMS, D. A. *see also* WHITTON, P. D. 153–165
HEMS, R., LUND, P. & KREBS, H. A. Rapid separation of isolated hepatocytes or similar tissue fragments for analysis of cell constituents 47–50
HENNEMANN, G. *see* VISSER, T. J. 489–493
HEXT, P. M. & ROSE, F. A. The sulphation of *p*-hydroxyphenylpyruvic acid and related compounds by the rat liver cytosol 175–181
HOFFENBERG, R. *see* TAVILL, A. S. 495–509
HOLLOWAY, P. A. H. *see* BLACKSHEAR, P. J. 379–387
HUGHES, R. C. *see* BUTTERS, T. D. 59–69

ILIC, V. *see* WILLIAMSON, D. H. 145–152

JANSZEN, F. H. A. *see* COOKE, B. A. 413–418
JENNER, D. A. *see* POWELL-JONES, W. 71–75
JOHN, P. *see* BURNELL, J. N. 527–536
JOPE, R. & BLASS, J. P. A comparison of the regulation of pyruvate dehydrogenase in mitochondria from rat brain and liver 397–403

JOTHY, S., BILODEAU, J.-L., CHAMPSAUR, H. & SIMPKINS, H. The early enhancement of rat liver deoxyribonucleic acid-dependent ribonucleic acid polymerase II activity by tri-iodothyronine 133–135

KAPLOWITZ, N. *see* CLIFTON, G. 259–262
KAY, W. W. & BRAGG, P. D. *Salmonella typhimurium* HfrA, a mutant in which adenosine triphosphate can drive amino acid transport but not energy-dependent nicotinamide nucleotide transhydrogenation 21–29
KING, R. F. G. J. *see* BROWN, S. B. 565–567
KORNBERG, H. L. *see* BÄCHI, B. 123–128
KREBS, H. A. *see* HEMS, R. 47–50; STUBBS, M. 41–45
KUHLENKAMP, J. *see* CLIFTON, G. 259–262

LEPREUX, C. *see* LOREAU, N. 305–314
LOREAU, N., LEPREUX, C. & ARDAILLOU, R. Calcitonin-sensitive adenylate cyclase in rat renal tubular membranes 305–314
LOTLIKAR, P. D. & ZALESKI, K. Ring- and *N*-hydroxylation of 2-acetamidofluorene by rat liver reconstituted cytochrome *P*-450 enzyme system. 561–564
LUND, P. *see* HEMS, R. 47–50

MACDONNELL, P. C., RYDER, E., DELVALLE, J. A. & GREENGARD, O. Biochemical changes in cultured foetal rat liver explants 269–273
MADELEY, A. *see* PETERSBURG, S. J. 315–321
MAHADEVAN, S. *see* SAUER, F. D. 357–372
MAK, W. W.-N. *see* BEATTY, B. G. 463–468
MAYOR, F. *see* MORENO, F. J. 51–58
MCGIVAN, J. D. *see* MOSS, K. M. 275–283
MCKEOWN, S. R. *see* WILLIAMSON, D. H. 145–152
MEDINA, J. M. *see* MORENO, F. J. 51–58
MEIJER, A. J., VAN WOERKOM, G. M., WILLIAMSON, J. R. & TAGER, J. M. Rate-limiting factors in the oxidation of ethanol by isolated rat liver cells 205–209
MERRETT, M. J. *see* COLLINS, N. 373–377
METCALFE, J. *see* TAVILL, A. S. 495–509
MEYUHAS, O. *see* GUNN, J. M. 195–203
MILLWARD, D. J., GARLICK, P. J., STEWART, R. J. C., NNANYELUGO, D. O. & WATERFLOW, J. C. Skeletal-muscle growth and protein turnover 235–243
MORENO, F. J., SÁNCHEZ-URRUTIA, L., MEDINA, J. M., SÁNCHEZ-MEDINA, F. & MAYOR, F. Stimulation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) activity by low concentrations of circulating glucose in perfused rat liver 51–58
MOSS, K. M. & MCGIVAN, J. D. Characteristics of aspartate deamination by the purine nucleotide cycle in the cytosol fraction of rat liver 275–283

NADKARNI, D. *see* TAVILL, A. S. 495–509
NAMBOODIRI, M. A. A. & RAMASARMA, T. Effect of environmental stress of low pressure on tyrosine aminotransferase and phenylalanine 4-hydroxylase activities in the rat 263–268
NEUBERGER, A. *see* SANDY, J. D. 245–257
NEWSHOLME, E. A. *see* SUGDEN, P. H. 105–111, 113–122
NNANYELUGO, D. O. *see* MILLWARD, D. J. 235–243
NORMAN, M. R. *see* DEL FAVERO, A. 573–576
NORTHCOTE, D. H. *see* BOFFEY, S. A. 433–440

PEACOCK, A. C. *see* SWANN, P. F. 335–344
PEETERS-JORIS, C., VANDEVOORDE, A.-M. & BAUDHUIN, P. Subcellular localization of superoxide dismutase in rat liver 31–39
PETERSBURG, S. J., MADELEY, A. & ROBINSON, D. S. A study of the interrelationship between the triacylglycerol and protein components of very-low-density lipoproteins using the perfused rat liver 315–321
POLLAK, J. K. The maturation of the inner membrane of foetal rat liver mitochondria. An example of a positive-feedback mechanism 477–488
POWELL-JONES, W., JENNER, D. A., BLAMEY, R. W., DAVIES, P. & GRIFFITHS, K. Influence of anti-oestrogens on the specific binding *in vitro* of [^{3}H]oestradiol by cytosol of rat mammary tumours and human breast carcinomata 71–75

QUAYLE, J. R. *see* COX, R. B. 569–571

RAMASARMA, T. *see* NAMBOODIRI, M. A. A. 263–268
RATH, E. A. *see* HEMS, D. A. 167–173
RESHEF, L. *see* GUNN, J. M. 195–203
ROBINSON, D. S. *see* PETERSBURG, S. J. 315–321
ROSE, F. A. *see* HEXT, P. M. 175–181
RYDER, E. *see* MACDONNELL, P. C. 269–273

SAGGERSON, E. D. *see* SOORANNA, S. R. 441–451
SAHIB, M. K. *see* HANNAH, R. 329–333
SÁNCHEZ-MEDINA, F. *see* MORENO, F. J. 51–58
SÁNCHEZ-URRUTIA, L. *see* MORENO, F. J. 51–58
SANDY, J. D., DAVIES, R. C. & NEUBERGER, A. Control of 5-aminolaeuvulinate synthetase activity in *Rhodopseudomonas spheroides*. A role for trisulphides 245–257
SAUER, F. D., ERFLE, J. D. & MAHADEVAN, S. Amino acid biosynthesis in mixed rumen cultures 357–372
SHEN, T.-F. & STRECKER, H. J. Synthesis of proline and hydroxyproline in human lung (WI-38) fibroblasts 453–461
SHKEDY-VINKLER, C. & AVI-DOR, Y. Betaine-induced stimulation of respiration at high osmolarities in a halotolerant bacterium 219–226
SIMPKINS, H. *see* JOTHY, S. 133–135
SOORANNA, S. R. & SAGGERSON, E. D. Studies on the role of insulin in the regulation of glyceride synthesis in rat epididymal adipose tissue 441–451
SPEAKE, R. N. *see* ASHBY, J. P. 89–96
STANLEY, K. K. & TUBBS, P. K. The role of intermediates in mitochondrial fatty acid oxidation 77–88
STEWART, R. J. C. *see* MILLWARD, D. J. 235–243
STRECKER, H. J. *see* SHEN, T.-F. 453–461
STUBBS, M. & KREBS, H. A. The accumulation of aspartate in the presence of ethanol in rat liver 41–45
SUGDEN, P. H. & NEWSHOLME, E. A. Activities of citrate synthase, NAD$^+$-linked and NADP$^+$-linked isocitrate dehydrogenases, glutamate dehydrogenase, aspartate aminotransferase and alanine aminotransferase in nervous tissues from vertebrates and invertebrates 105–111
SUGDEN, P. H. & NEWSHOLME, E. A. The effects of ammonium, inorganic phosphate and potassium ions on the activity of phosphofructokinases from muscle and nervous tissues of vertebrates and invertebrates 113–122
SWANN, P. F., PEACOCK, A. C. & BUNTING, S. Carcinogenesis and cellular injury. The effect of ethionine on ribonucleic acid synthesis in rat liver 335–344

TAGER, J. M. *see* MEIJER, A. J. 205–209
TATA, J. R. & BAKER, B. Differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction of egg-yolk protein synthesis in male *Xenopus* liver by oestradiol-17β 345–355
TAVILL, A. S., NADKARNI, D., METCALFE, J., BLACK, E., HOFFENBERG, R. & CARSON, E. R. Hepatic albumin and urea synthesis. The mathematical modelling of the dynamics of [^{14}C]carbonate-derived guanidine-labelled arginine in the isolated perfused rat liver 495–509
TENG, C. S. & TENG, C. T. Studies on sex-organ development. Isolation and characterization of an oestrogen receptor from chick Müllerian duct 183–190
TENG, C. S. & TENG, C. T. Studies on sex-organ development. Ontogeny of cytoplasmic oestrogen receptor in chick Müllerian duct 191–194
TENG, C. T. *see* TENG, C. S. 183–190, 191–194
THOMAS, G. H. *see* FULLER, D. J. M. 557–559
TITHERAGE, M. A. & COORE, H. G. Initial rates of pyruvate transport in mitochondria determined by an 'inhibitor-stop' technique 553–556
TUBBS, P. K. *see* STANLEY, K. K. 77–88
TUNNICLIFF, G. Glutamate uptake by chick retina 297–299

VAN DER DOES-TOBÉ, I. *see* VISSER, T. J. 489–493
VAN DER MOLEN, H. J. *see* COOKE, B. A. 413–418
VANDEVOORDE, A.-M. *see* PEETERS-JORIS, C. 31–39
VAN WOERKOM, G. M. *see* MEIJER, A. J. 205–209
VERRINDER, T. R. *see* HEMS, D. A. 167–173
VISSER, T. J., VAN DER DOES-TOBÉ, I., DOCTER, R. & HENNEMANN, G. Conversion of thyroxine into tri-iodothyronine by rat liver homogenate 489–493

WALLIN, J. D. *see* CLIFTON, G. 259–262
WATERLOW, J. C. *see* MILLWARD, D. J. 235–243
WATSON, J. & WRIGGLESWORTH, P. M. Progesterone synthesis by pig corpus luteum tissue during superfusion 301–304
WHATLEY, F. R. *see* BURNELL, J. N. 527–536
WHITTON, P. D. & HEMS, D. A. Glycogen synthesis in the perfused liver of streptozotocin-diabetic rats 153–165
WILKINSON, C. F. *see* BRATTSTEN, L. B. 97–104
WILLIAMSON, D. H., MCKEOWN, S. R. & ILIC, V. Metabolic interactions of glucose, acetoacetate and insulin in mammary-gland slices of lactating rats 145–152
WILLIAMSON, J. R. *see* MEIJER, A. J. 205–209
WONG, J. T.-F. *see* BEATTY, B. G. 463–468
WRIGGLESWORTH, P. M. *see* WATSON, J. 301–304

YOUNG, R. *see* DALBOW, D. G. 13–20

ZALESKI, K. *see* LOTLIKAR, K. 561–564
ZATMAN, L. J. *see* COLBY, J. 141–144

Index of Subjects

2-Acetamidofluorene, ring- and *N*-hydroxylation of, by a reconstituted cytochrome *P*-450 enzyme system from rat liver microsomal fraction (Lotlikar, P. D. & Zaleski, K.) 561–564

Acetoacetate, metabolic interactions of insulin, glucose and, in lactating rat mammary-gland slices (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152

Actinomycin D, comparison of the effects of, and of deprivation of zinc ions on the biosynthesis of ribonucleic acid by stimulated pig lymphocytes (Chesters, J. K.) 211–218

N-Acylphosphatidylethanolamine, intermolecular transacylation of phosphatidylethanolamine to form lysophosphatidylethanolamine and, by a *Butyrivibrio* sp. (Hazlewood, G. P. & Dawson, R. M. C.) 521–525

Adenine nucleotides, regulation by reduced nicotinamide–adenine dinucleotide, 2-oxoglutarate and, of the activity of citrate synthase in various methylotrophic bacteria (Colby, J. & Zatman, L. J.) 141–144

Adenosine 3′:5′-cyclic monophosphate, role of, in the induction of the catabolism of gluconate in *Escherichia coli* K12 (Bächi, B. & Kornberg, H. L.) 123–128

Adenosine 3′:5′-cyclic monophosphate, role of, in the stimulation of the activity of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in perfused rat liver by low concentrations of glucose in the perfusion medium (Moreno, F. J., Sánchez-Urrutia, L., Medina, J. M., Sánchez-Medina, F. & Mayor, F.) 51–58

Adenosine triphosphate, ability of, to drive the transport of amino acids but not the energy-dependent transhydrogenation of nicotinamide–adenine dinucleotide (phosphate) in *Salmonella typhimurium* strain HfrA (Kay, W. W. & Bragg, P. D.) 21–29

Adenylate cyclase, sensitivity of the activity of, in rat kidney-tubule membranes to calcitonin (Loreau, N., Lepreux, C. & Ardaillou, R.) 305–314

Adenylate deaminase, activities of, and other components of the purine nucleotide cycle in rat liver cytosol fraction (Moss, K. M. & McGivan, J. D.) 275–283

Adipocytes, epididymal, rat, isolated, role of insulin in the regulation of the biosynthesis of glycerides in (Sooranna, S. R. & Saggerson, E. D.) 441–451

Adipose tissue, epididymal, rat, role of insulin in the regulation of the biosynthesis of glycerides in (Sooranna, S. R. & Saggerson, E. D.) 441–451

Adipose tissue, mouse, biosynthesis of fatty acids in, and liver of normal and genetically obese (*ob*/*ob*) animals during the 24-hour diurnal cycle (Hems, D. A., Rath, E. A. & Verrinder, T. R.) 167–173

Alanine aminotransferase, activities of, and other enzymes associated with the tricarboxylic acid cycle in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111

Alanine, device for the rapid separation of isolated hepatocytes or similar tissue fragments for determination of the concentrations of, and other cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50

Alanine, effect of 3-mercaptopicolinate on gluconeogenesis from, in isolated perfused rat liver (Goodman, M. N.) 137–139

Alanine, factors regulating the release of glutamine and, from extrasplanchnic tissues in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387

Albumin, plasma, mathematical modelling of the dynamics of the incorporation of radioactivity from [^{14}C]-carbonate into urea and the guanidine moiety of arginine residues of, in isolated perfused rat liver (Tavill, A. S., Nadkarni, D., Metcalfe, J., Black, E., Hoffenberg, R. & Carson, E. R.) 495–509

Alcohol dehydrogenase, role of, in the regulation of the oxidation of ethanol by isolated rat liver cells (Meijer, A. J., van Woerkom, G. M., Williamson, J. R. & Tager, J. M.) 205–209

Amino acids, ability of adenosine triphosphate to drive the transport of, but not the energy-dependent transhydrogenation of nicotinamide–adenine dinucleotide (phosphate) in *Salmonella typhimurium* strain HfrA (Kay, W. W. & Bragg, P. D.) 21–29

Amino acids, activities of enzymes associated with the tricarboxylic acid cycle and the metabolism of, in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111

Amino acids, analysis of, attached to rabbit liver transfer ribonucleic acid *in vivo* (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432

Amino acids, biosynthesis of, in cultures of mixed rumen micro-organisms (Sauer, F. D., Erfle, J. D. & Mahadevan, S.) 357–372

Amino acids, effects of inhibitors on the biosynthesis of protein and on the pool of, in the blowfly *Lucilia cuprina* (Campbell, A. J. & Birt, L. M.) 227–234

Amino acids, factors regulating the release of, from extrasplanchnic tissues in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387

Aminoacyl-transfer ribonucleic acid, liver, rabbit, analysis of the amino acid components of, *in vivo* (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432

4-Aminobutyrate, conversion of threonine into, and other amino acids in rat brain during thiamin deficiency (Gaitonde, M. K.) 285–295

5-Aminolaevulinate, effects of the administration of haematin and of, and comparison of the substrate and hormonal mechanisms for the regulation of the activity of tryptophan pyrrolase by its cofactor haem in rat liver (Badawy, A. A.-B. & Evans, M.) 511–520

5-Aminolaevulinate synthetase, properties of, and its relationship to the activity of microsomal mixed-function oxidases in the southern armyworm (Brattsten, L. B. & Wilkinson, C. F.) 97–104

5-Aminolaevulinate synthetase, role of trisulphides in the control of the activity of, in *Rhodopseudomonas spheroides* N.C.I.B. 8253 (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257

Ammonium ions, effects of inorganic phosphate, potassium ions and, on the activity of phosphofructokinase of muscle and nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122

Ammonium lactate, formation of aspartate from, by isolated rat hepatocytes in the presence of ethanol (Stubbs, M. & Krebs, H. A.) 41–45

Arabinose, incorporation of, into pectin during the regeneration of the cell walls of plasmolysed tobacco-leaf cells (Boffey, S. A. & Northcote, D. H.) 433–440

Arginine, conversion of glutamate and, into proline and hydroxyproline in cultured human WI-38 lung fibroblasts (Shen, T.-F. & Strecker, H. J.) 453–461

Arginine residues, mathematical modelling of the dynamics of the incorporation of radioactivity from [^{14}C]carbonate into urea and the guanidine moiety of, of plasma albumin in isolated perfused rat liver (Tavill, A. S., Nadkarni, D., Metcalfe, J., Black, E., Hoffenberg, R. & Carson, E. R.) 495–509

Aspartate, accumulation of, in the presence of ethanol in rat liver (Stubbs, M. & Krebs, H. A.) 41–45

Aspartate aminotransferase, activities of, and other enzymes associated with the tricarboxylic acid cycle in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111

Aspartate aminotransferase, changes in the activities of, and other enzymes during culture of foetal rat liver explants (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273

Aspartate, characteristics of the deamination of, by the purine nucleotide cycle in rat liver cytosol fraction (Moss, K. M. & McGivan, J. D.) 275–283

Aspartate, conversion of threonine into, and other amino acids in rat brain during thiamin deficiency (Gaitonde, M. K.) 285–295

Aspartate, device for the rapid separation of isolated hepatocytes or similar tissue fragments for determination of the concentrations of, and other cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50

Axis tissues, pea-seedling, germinating, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase in, and cotyledons *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328

Bacillus PM6, regulation by reduced nicotinamide–adenine dinucleotide, adenine nucleotides and 2-oxoglutarate of the activity of citrate synthase in, and other methylotrophs (Colby, J. & Zatman, L. J.) 141–144

Bacterium, halotolerant, betaine-induced stimulation of respiration at high osmolarities in (Shkedy-Vinkler, C. & Avi-Dor, Y.) 219–226

Benzo[3,4]pyrene, induction by, of the activities of glutathione *S*-transferases in rat kidney (Clifton, G., Kaplowitz, N., Wallin, J. D. & Kuhlenkamp, J.) 259–262

Betaine, induction by, of the stimulation of respiration at high osmolarities in a halotolerant bacterium (Shkedy-Vinkler, C. & Avi-Dor, Y.) 219–226

Bilirubin, use of [$^{18,18}O_2$]oxygen in a double-labelling study of the catabolism of haemoglobin to, in the rat (Brown, S. B. & King, R. F. G. J.) 565–567

Blood, effect of functional hepatectomy on the release of alanine and glutamine from extrasplanchnic tissues into, in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387

Blood platelets, *see* Platelets

Blowfly (*Lucilia cuprina*), effects of inhibitors *in vivo* on the biosynthesis of protein and on the amino acid pool in (Campbell, A. J. & Birt, L. M.) 227–234

Brain, rat, comparison of the regulation of the activity of pyruvate dehydrogenase in mitochondria from, and liver (Jope, R. & Blass, J. P.) 397–403

Brain, rat, conversion of threonine into other amino acids in, during thiamin deficiency (Gaitonde, M. K.) 285–295

Breast tumours, human, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by cytosol from rat mammary-gland tumours and (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75

Butyrivibrio sp., intermolecular transacylation of phosphatidylethanolamine to form *N*-acylphosphatidylethanolamine and lysophosphatidylethanolamine by (Hazlewood, G. P. & Dawson, R. M. C.) 521–525

Calcitonin, sensitivity of the activity of adenylate cyclase in rat kidney-tubule membranes to (Loreau, N., Lepreux, C. & Ardaillou, R.) 305–314

Calcium ionophores, effects of, on the secretion of insulin and glucagon by isolated rat islets of Langerhans (Ashby, J. P. & Speake, R. N.) 89–96

Calcium ions, stimulation by elevated plasma concentrations of insulin of the transport of, by rat liver mitochondria (Dorman, D. M., Barritt, G. J. & Bygrave, F. L.) 389–395

[^{14}C]Carbonate, mathematical modelling of the dynamics of the incorporation of radioactivity from, into urea and the guanidine moiety of arginine residues of plasma albumin in isolated perfused rat liver (Tavill, A. S., Nadkarni, D., Metcalfe, J., Black, E., Hoffenberg, R. & Carson, E. R.) 495–509

Carboxylation, reductive, formation of 2-oxo acid precursors of amino acids by, in cultures of mixed rumen micro-organisms (Sauer, F. D., Erfle, J. D. & Mahadevan, S.) 357–372

Cell wall, biosynthesis of pectin during the regeneration of, of plasmolysed tobacco-leaf cells (Boffey, S. A. & Northcote, D. H.) 433–440

Cells, heart-muscle, rat, cultured, stimulation by glucose of the biosynthesis of protein in (David, M. & Avi-Dor, Y.) 405–411

Cells, KB, human, iodination and fractionation of the glycoproteins of the plasma membrane of (Butters, T. D. & Hughes, R. C.) 59–69

Cells, Leydig, rat, effects of inhibitors of protein biosynthesis on the production of testosterone by preparations of rat testis interstitial tissue and of (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418

Cells, liver, isolated, device for the rapid separation of, or similar tissue fragments for determination of the concentrations of cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50
Cells, liver, rat, isolated, formation of aspartate from ammonium lactate by, in the presence of ethanol (Stubbs, M. & Krebs, H. A.) 41–45
Cells, liver, rat, isolated, rate-limiting factors in the oxidation of ethanol by (Meijer, A. J., van Woerkom, G. M., Williamson, J. R. & Tager, J. M.) 205–209
Cells, tobacco-leaf, plasmolysed, biosynthesis of pectin during the regeneration of the cell walls of (Boffey, S. A. & Northcote, D. H.) 433–440
Chick embryo, isolation and characterization of an oestrogen receptor protein from Müllerian duct of (Teng, C. S. & Teng, C. T.) 183–190
Chick embryo, ontogeny of the cytoplasmic oestrogen receptor protein in Müllerian duct of (Teng, C. S. & Teng, C. T.) 191–194
Chick, uptake of glutamate by retina from (Tunnicliff, G.) 297–299
p-Chloro-*N*-methylaniline *N*-demethylase, microsomal, properties of 5-aminolaevulinate synthetase and its relationship to the activity of, in the southern armyworm (Brattsten, L. B. & Wilkinson, C. F.) 97–104
Citrate synthase, activities of, and other enzymes associated with the tricarboxylic acid cycle in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111
Citrate synthase, regulation by reduced nicotinamide–adenine dinucleotide, adenine nucleotides and 2-oxoglutarate of the activity of, in various methylotrophic bacteria (Colby, J. & Zatman, L. J.) 141–144
Citric acid cycle, *see* Tricarboxylic acid cycle
Corpus luteum, pig, biosynthesis of progesterone by, during superfusion (Watson, J. & Wrigglesworth, P. M.) 301–304
Cotyledons, pea-seedling, germinating, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase in, and axis tissues *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328
α-Cyano-3-hydroxycinnamate, use of, in the determination of initial rates of pyruvate transport in rat liver mitochondria by an 'inhibitor-stop' technique (Titheradge, M. A. & Coore, H. G.) 553–556
Cyclic adenosine 3′:5′-monophosphate, *see* Adenosine 3′:5′-cyclic monophosphate
Cycloartenol–*S*-adenosylmethionine methyltransferase, activities of 2,3-oxidosqualene cyclase and, in the cotyledon and axis tissues of germinating pea seedlings *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328
Cystine, role of the trisulphide analogue of, and other trisulphides in the control of the activity of 5-aminolaevulinate synthetase in *Rhodopseudomonas spheroides* N.C.I.B. 8253 (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257
Cytochrome *P*-450, ring- and *N*-hydroxylation of 2-acetamidofluorene by a reconstituted enzyme system containing, from rat liver microsomal fraction (Lotlikar, P. D. & Zaleski, K.) 561–564
Cytosol, breast-tumour, human, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75
Cytosol, liver, rat, characteristics of the deamination of aspartate by the purine nucleotide cycle in (Moss, K. M. & McGivan, J. D.) 275–283
Cytosol, liver, rat, localization of superoxide dismutase in, and mitochondria (Peeters-Joris, C., Vandevoorde, A.-M. & Baudhuin, P.) 31–39
Cytosol, liver, rat, sulphation of *p*-hydroxyphenylpyruvate and related compounds by (Hext, P. M. & Rose, F. A.) 175–181
Cytosol, mammary-gland-tumour, rat, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75

2-Deoxy-5-iodouridine, relationship between the activity of ornithine decarboxylase and the incorporation of, in rat ventral and dorsolateral prostate glands (Fuller, D. J. M., Donaldson, L. J. & Thomas, G. H.) 557–559
Development, embryonic, ontogeny of the cytoplasmic oestrogen receptor protein in Müllerian duct of the chick during (Teng, C. S. & Teng, C. T.) 191–194
Development, foetal and neonatal, positive-feedback control of the maturation of the inner membrane of rat liver mitochondria during (Pollak, J. K.) 477–488
Diabetes, streptozotocin-, biosynthesis of glycogen in perfused rat liver during (Whitton, P. D. & Hems, D. A.) 153–165
Diabetes, streptozotocin-, metabolic interactions of glucose, acetoacetate and insulin in lactating rat mammary-gland slices during (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152
Dichloroacetate, effect of, on the release of amino acids from extrasplanchnic tissues in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387
Diet, effect of, on the release of the triacylglycerol and protein components of very-low-density lipoproteins by perfused rat liver (Petersburg, S. J., Madeley, A. & Robinson, D. S.) 315–321
Diethyl pyrocarbonate, use of, for the extraction of transfer ribonucleic acid with attached amino acids from rabbit liver (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432
Diphosphoinositide phosphatase, kidney, rat, properties and subcellular localization of, and triphosphoinositide phosphatase (Cooper, P. H. & Hawthorne, J. N.) 537–551

Egg-yolk protein, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by oestradiol-17β of the biosynthesis of, in male *Xenopus laevis* liver (Tata, J. R. & Baker, B.) 345–355
Epididymis, rat, role of insulin in the regulation of the biosynthesis of glycerides in adipose tissue of (Sooranna, S. R. & Saggerson, E. D.) 441–451
Escherichia coli A.T.C.C. 12632, regulation of the biosynthesis of ribosomal proteins in, during deprivation of pyrimidines (Beatty, B. G., Mak, W. W.-N. & Wong, J. T.-F.) 463–468
Escherichia coli B/r, activities of genes coding for ribosomal ribonucleic acid and ribosomal proteins in (Bremer, H. & Dennis, P. P.) 469–475

Escherichia coli B/r A.T.C.C. 12407, regulatory state of the genes controlling the synthesis of ribosomes and physiological changes in the concentration of free ribonucleic acid polymerase in (Bremer, H. & Dalbow, D. G.) 9–12
Escherichia coli B/r A.T.C.C. 12407, relationship between the rate of biosynthesis of β-galactosidase and the rate of growth in (Dalbow, D. G. & Young, R.) 13–20
Escherichia coli B/r A.T.C.C. 12407, relationship between the rate of constitutive synthesis of ribosomes and the rate of biosynthesis of β-galactosidase in (Dalbow, D. G. & Bremer, H.) 1–8
Escherichia coli K12, role of adenosine 3′:5′-cyclic monophosphate in the induction of the catabolism of gluconate in (Bächi, B. & Kornberg, H. L.) 123–128
Estradiol, *see* Oestradiol
Estrogens, *see* Oestrogens
Ethanol, accumulation of aspartate in the presence of, in rat liver (Stubbs, M. & Krebs, H. A.) 41–45
Ethanol, rate-limiting factors in the oxidation of, by isolated rat liver cells (Meijer, A. J., van Woerkom, G. M., Williamson, J. R. & Tager, J. M.) 205–209
Ethionine, effect of, on the biosynthesis of ribonucleic acid in rat liver (Swann, P. F., Peacock, A. C. & Bunting, S.) 335–344
Ethoxyformic anhydride, *see* Diethyl pyrocarbonate
Euglena gracilis, phototrophic, oxidative phosphorylation during the metabolism of glycollate in mitochondria from (Collins, N., Brown, R. H. & Merrett, M. J.) 373–377

Fat-cells, epididymal, rat, isolated, role of insulin in the regulation of the biosynthesis of glycerides in (Sooranna, S. R. & Saggerson, E. D.) 441–451
Fatty acids, long-chain, biosynthesis of, in liver and adipose tissue of normal and genetically obese (*ob*/*ob*) mice during the 24-hour diurnal cycle (Hems, D. A., Rath, E. A. & Verrinder, T. R.) 167–173
Fatty acids, role of insulin in the regulation of the biosynthesis of, in rat epididymal adipose tissue (Sooranna, S. R. & Saggerson, E. D.) 441–451
Fatty acids, role of intermediates in the β-oxidation of, by rat liver mitochondria (Stanley, K. K. & Tubbs, P. K.) 77–88
Fibroblasts, lung, WI-38, human, cultured, biosynthesis of proline and hydroxyproline in (Shen, T.-F. & Strecker, H. J.) 453–461
Fructose, effect of, on the biosynthesis of glycogen in perfused rat liver during streptozotocin-induced diabetes (Whitton, P. D. & Hems, D. A.) 153–165

β-Galactosidase, relationship between the rate of biosynthesis of, and rate of growth in *Escherichia coli* B/r A.T.C.C. 12407 (Dalbow, D. G. & Young, R.) 13–20
β-Galactosidase, relationship between the rate of constitutive synthesis of ribosomes and the rate of biosynthesis of, in *Escherichia coli* B/r A.T.C.C. 12407 (Dalbow, D. G. & Bremer, H.) 1–8
Genes, activities of, coding for ribosomal ribonucleic acid and ribosomal proteins in *Escherichia coli* B/r (Bremer, H. & Dennis, P. P.) 469–475
Genes, regulatory state of, controlling the synthesis of ribosomes and physiological changes in the concentration of free ribonucleic acid polymerase in *Escherichia coli* B/r A.T.C.C. 12407 (Bremer, H. & Dalbow, D. G.) 9–12
Germination, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase in the cotyledon and axis tissues of pea seedlings *in vivo* during (Fang, T.-Y. & Baisted, D. J.) 323–328
Glucagon, effects of calcium ionophores on the secretion of insulin and, by isolated rat islets of Langerhans (Ashby, J. P. & Speake, R. N.) 89–96
Glucocorticoids, role of, in the regulation of the biosynthesis and degradation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in rat liver and kidney *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203
Gluconate, role of adenosine 3′:5′-cyclic monophosphate in the induction of the catabolism of, in *Escherichia coli* K12 (Bächi, B. & Kornberg, H. L.) 123–128
Gluconeogenesis, effects of 3-mercaptopicolinate on, and the concentrations of gluconeogenic metabolites in isolated perfused rat liver (Goodman, M. N.) 137–139
Gluconeogenesis, stimulation of the activity of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in perfused rat liver by low concentrations of glucose in the perfusion medium and its role in the regulation of (Moreno, F. J., Sánchez-Urrutia, L., Medina, J. M., Sánchez-Medina, F. & Mayor, F.) 51–58
Glucose, effect of 3-mercaptopicolinate on the formation of, in isolated perfused rat liver (Goodman, M. N.) 137–139
Glucose, metabolic interactions of insulin, acetoacetate and, in lactating rat mammary-gland slices (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152
Glucose, minor role of, in the biosynthesis of fatty acids in liver and adipose tissue of normal and genetically obese (*ob*/*ob*) mice during the 24-hour diurnal cycle (Hems, D. A., Rath, E. A. & Verrinder, T. R.) 167–173
Glucose, stimulation by, of the biosynthesis of protein in cultured rat heart-muscle cells (David, M. & Avi-Dor, Y.) 405–411
Glucose, stimulation of the activity of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in perfused rat liver by low concentrations of, in the perfusion medium (Moreno, F. J., Sánchez-Urrutia, L., Medina, J. M., Sánchez-Medina, F. & Mayor, F.) 51–58
Glutamate, conversion of arginine and, into proline and hydroxyproline in cultured human WI-38 lung fibroblasts (Shen, T.-F. & Strecker, H. J.) 453–461
Glutamate, conversion of threonine into, and other amino acids in rat brain during thiamin deficiency (Gaitonde, M. K.) 285–295
Glutamate dehydrogenase, activities of, and other enzymes associated with the tricarboxylic acid cycle in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111
Glutamate dehydrogenase, changes in the activities of, and other enzymes during culture of foetal rat liver explants (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273

Glutamate, device for the rapid separation of isolated hepatocytes or similar tissue fragments for determination of the concentrations of, and other cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50
Glutamate, uptake of, by chick retina (Tunnicliff, G.) 297–299
Glutamine, conversion of threonine into, and other amino acids in rat brain during thiamin deficiency (Gaitonde, M. K.) 285–295
Glutamine, factors regulating the release of alanine and, from extrasplanchnic tissues in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387
Glutathione, oxidized, role of the trisulphide analogue of, and other trisulphides in the control of the activity of 5-aminolaevulinate synthetase in *Rhodopseudomonas spheroides* N.C.I.B. 8253 (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257
Glutathione *S*-transferases, induction by drugs and sex differences in the activities of, in rat kidney (Clifton, G., Kaplowitz, N., Wallin, J. D. & Kuhlenkamp, J.) 259–262
Glycerides, role of insulin in the regulation of the biosynthesis of, in rat epididymal adipose tissue (Sooranna, S. R. & Saggerson, E. D.) 441–451
Glycogen, biosynthesis of, in perfused rat liver during streptozotocin-induced diabetes (Whitton, P. D. & Hems, D. A.) 153–165
Glycogen synthetase, activity of, in perfused rat liver during streptozotocin-induced diabetes (Whitton, P. D. & Hems, D. A.) 153–165
Glycollate, oxidative phosphorylation during the metabolism of, in *Euglena gracilis* mitochondria (Collins, N., Brown, R. H. & Merrett, M. J.) 373–377
Glycolysis, effects of ammonium ions and inorganic phosphate on the activity of phosphofructokinase and their role in the regulation of, in muscle and nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122
Glycoproteins, iodination and fractionation of, of the plasma membrane of human tumour KB cells (Butters, T. D. & Hughes, R. C.) 59–69
Gonadotrophin, stimulation by, of the biosynthesis of progesterone by pig corpus luteum tissue during superfusion (Watson, J. & Wrigglesworth, P. M.) 301–304
Growth, rates of the biosynthesis and degradation of protein during, of rat skeletal muscle (Millward, D. J., Garlick, P. J., Stewart, R. J. C., Nnanyelugo, D. O. & Waterlow, J. C.) 235–243
Growth, relationship between the rate of biosynthesis of β-galactosidase and the rate of, in *Escherichia coli* B/r A.T.C.C. 12407 (Dalbow, D. G. & Young, R.) 13–20

Haem, effects of the administration of haematin and of 5-aminolaevulinate and comparison of the substrate and hormonal mechanisms for the regulation of the activity of tryptophan pyrrolase by, in rat liver (Badawy, A. A.-B. & Evans, M.) 511–520
Haematin, effects of the administration of, and of 5-aminolaevulinate and comparison of the substrate and hormonal mechanisms for the regulation of the activity of tryptophan pyrrolase by its cofactor haem in rat liver (Badawy, A. A.-B. & Evans, M.) 511–520
Haemoglobin, use of [$^{18,18}O_2$]oxygen in a double-labelling study of the catabolism of, to bilirubin in the rat (Brown, S. B. & King, R. F. G. J.) 565–567
Heart-muscle cells, rat, cultured, stimulation by glucose of the biosynthesis of protein in (David, M. & Avi-Dor, Y.) 405–411
Hepatectomy, functional, effect of, on the release of alanine and glutamine from extrasplanchnic tissues in the rat (Blackshear, P. J., Holloway, P. A. H. & Alberti, K. G. M. M.) 379–387
Hepatocytes, isolated, device for the rapid separation of, or similar tissue fragments for determination of the concentrations of cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50
Hepatocytes, rat, isolated, formation of aspartate from ammonium lactate by, in the presence of ethanol (Stubbs, M. & Krebs, H. A.) 41–45
Hepatocytes, rat, isolated, rate-limiting factors in the oxidation of ethanol by (Meijer, A. J., van Woerkom, G. M., Williamson, J. R. & Tager, J. M.) 205–209
Hexokinase, changes in the activities of, and other enzymes during culture of foetal rat liver explants (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273
Homogentisate, sulphation of, by rat liver cytosol (Hext, P. M. & Rose, F. A.) 175–181
p-Hydroxybenzaldehyde, sulphation of, by rat liver cytosol (Hext, P. M. & Rose, F. A.) 175–181
p-Hydroxybenzyl alcohol, sulphation of, by rat liver cytosol (Hext, P. M. & Rose, F. A.) 175–181
p-Hydroxyphenylpyruvate, sulphation of, and related compounds by rat liver cytosol (Hext, P. M. & Rose, F. A.) 175–181
Hydroxyproline, biosynthesis of proline and, in cultured human WI-38 lung fibroblasts (Shen, T.-F. & Strecker, H. J.) 453–461
5-Hydroxytryptamine, specific binding sites for, on rat platelets (Drummond, A. H. & Gordon, J. L.) 129–132

Inorganic phosphate, *see* Phosphate, inorganic
Insulin, effects of calcium ionophores on the secretion of glucagon and, by isolated rat islets of Langerhans (Ashby, J. P. & Speake, R. N.) 89–96
Insulin, lack of direct action of, on the biosynthesis of glycogen in perfused rat liver during streptozotocin-induced diabetes (Whitton, P. D. & Hems, D. A.) 153–165
Insulin, metabolic interactions of glucose, acetoacetate and, in lactating rat mammary-gland slices (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152
Insulin, role of, in the regulation by glucocorticoids of the biosynthesis and degradation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in rat liver and kidney *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203
Insulin, role of, in the regulation of the biosynthesis of glycerides in rat epididymal adipose tissue (Sooranna, S. R. & Saggerson, E. D.) 441–451

Insulin, stimulation by elevated plasma concentrations of, of the transport of calcium ions by rat liver mitochondria (Dorman, D. M., Barritt, G. J. & Bygrave, F. L.) 389–395
5-Iodo-2-deoxyuridine, *see* 2-Deoxy-5-iodouridine
Islets of Langerhans, pancreas, rat, isolated, effects of calcium ionophores on the secretion of insulin and glucagon by (Ashby, J. P. & Speake, R. N.) 89–96
Isocitrate dehydrogenases, nicotinamide-adenine dinucleotide-linked and nicotinamide-adenine nucleotide phosphate-linked, activities of, and other enzymes associated with the tricarboxylic acid cycle in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111

KB cells, human, iodination and fractionation of the glycoproteins of the plasma membrane of (Butters, T. D. & Hughes, R. C.) 59–69
Kidney, rat, induction by drugs and sex differences in the activities of glutathione *S*-transferases in (Clifton, G., Kaplowitz, N., Wallin, J. D. & Kuhlenkamp, J.) 259–262
Kidney, rat, properties and subcellular localization of the phosphatases catalysing the hydrolysis of polyphosphoinositides in (Cooper, P. H. & Hawthorne, J. N.) 537–551
Kidney, rat, role of glucocorticoids in the regulation of the biosynthesis and degradation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in, and liver *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203
Kidney tubules, rat, sensitivity of the activity of adenylate cyclase in membranes from, to calcitonin (Loreau, N., Lepreux, C. & Ardaillou, R.) 305–314

Lactate, effect of 3-mercaptopicolinate on gluconeogenesis from, in isolated perfused rat liver (Goodman, M. N.) 137–139
Lactation, metabolic interactions of glucose, acetoacetate and insulin in rat mammary-gland slices during (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152
Leaf cells, tobacco, plasmolysed, biosynthesis of pectin during the regeneration of the cell walls of (Boffey, S. A. & Northcote, D. H.) 433–440
Leucine, activity of liver ribosomes for the incorporation of, into protein in porphyric mice (Del Favero, A., Gamulin, S., Gray, C. H. & Norman, M. R.) 573–576
Leucine, effects of inhibitors on the incorporation of, into protein and on the amino acid pool in the blowfly *Lucilia cuprina* (Campbell, A. J. & Birt, L. M.) 227–234
Leucine, stimulation by glucose of the incorporation of, into protein in cultured rat heart-muscle cells (David, M. & Avi-Dor, Y.) 405–411
Leydig cells, rat, effects of inhibitors of protein biosynthesis on the production of testosterone by preparations of rat testis interstitial tissue and of (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418
Lipogenesis in liver and adipose tissue of normal and genetically obese (*ob*/*ob*) mice during the 24-hour diurnal cycle (Hems, D. A., Rath, E. A. & Verrinder, T. R.) 167–173
Lipoproteins, very-low-density, effect of diet on the release of the triacylglycerol and protein components of, by perfused rat liver (Petersburg, S. J., Madeley, A. & Robinson, D. S.) 315–321
Liver cells, isolated, device for the rapid separation of, or similar tissue fragments for determination of the concentrations of cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50
Liver cells, rat, isolated, formation of aspartate from ammonium lactate by, in the presence of ethanol (Stubbs, M. & Krebs, H. A.) 41–45
Liver cells, rat, isolated, rate-limiting factors in the oxidation of ethanol by (Meijer, A. J., van Woerkom, G. M., Williamson, J. R. & Tager, J. M.) 205–209
Liver, mouse, activity of ribosomes in, of animals with porphyria (Del Favero, A., Gamulin, S., Gray, C. H. & Norman, M. R.) 573–576
Liver, mouse, biosynthesis of fatty acids in, and adipose tissue of normal and genetically obese (*ob*/*ob*) animals during the 24-hour diurnal cycle (Hems, D. A., Rath, E. A. & Verrinder, T. R.) 167–173
Liver, rabbit, analysis of the amino acids attached to transfer ribonucleic acid of, *in vivo* (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432
Liver, rat, accumulation of aspartate in the presence of ethanol in (Stubbs, M. & Krebs, H. A.) 41–45
Liver, rat, characteristics of the deamination of aspartate by the purine nucleotide cycle in cytosol fraction of (Moss, K. M. & McGivan, J. D.) 275–283
Liver, rat, comparison of the regulation of the activity of pyruvate dehydrogenase in mitochondria from, and brain (Jope, R. & Blass, J. P.) 397–403
Liver, rat, conversion of thyroxine into tri-iodothyronine by homogenate of (Visser, T. J., van der Does-Tobé, I., Docter, R. & Hennemann, G.) 489–493
Liver, rat, determination of initial rates of pyruvate transport in mitochondria from, by an 'inhibitor-stop' technique (Titheradge, M. A. & Coore, H. G.) 553–556
Liver, rat, early enhancement by the administration of tri-iodothyronine of the activity of deoxyribonucleic acid-dependent ribonucleic acid polymerase II of (Jothy, S., Bilodeau, J.-L., Champsaur, H. & Simpkins, H.) 133–135
Liver, rat, effect of ethionine on the biosynthesis of ribonucleic acid in (Swann, P. F., Peacock, A. C. & Bunting, S.) 335–344
Liver, rat, effects of environmental low pressure on the activities of tyrosine aminotransferase and phenylalanine 4-hydroxylase in (Namboodiri, M. A. A. & Ramasarma, T.) 263–268
Liver, rat, effects of the administration of haematin and of 5-aminolaevulinate and comparison of the substrate and hormonal mechanisms for the regulation of the activity of tryptophan pyrrolase by its cofactor haem in (Badawy, A. A.-B. & Evans, M.) 511–520
Liver, rat, foetal, biochemical changes in cultured explants of (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273
Liver, rat, foetal, positive-feedback control of the maturation of the inner membrane of mitochondria from (Pollak, J. K.) 477–488
Liver, rat, perfused, biosynthesis of glycogen in, during streptozotocin-induced diabetes (Whitton, P. D. & Hems, D. A.) 153–165

Liver, rat, perfused, effect of diet on the release of the triacylglycerol and protein components of very-low-density lipoproteins by (Petersburg, S. J., Madeley, A. & Robinson, D. S.) 315–321
Liver, rat, perfused, isolated, effects of 3-mercaptopicolinate on gluconeogenesis and the concentrations of gluconeogenic metabolites in (Goodman, M. N.) 137–139
Liver, rat, perfused, isolated, mathematical modelling of the dynamics of the incorporation of radioactivity from [^{14}C]carbonate into urea and the guanidine moiety of arginine residues of plasma albumin (Tavill, A. S., Nadkarni, D., Metcalfe, J., Black, E., Hoffenberg, R. & Carson, E. R.) 495–509
Liver, rat, perfused, stimulation of the activity of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in, by low concentrations of glucose in the perfusion medium (Moreno, F. J., Sánchez-Urrutia, L., Medina, J. M., Sánchez-Medina, F. & Mayor, F.) 51–58
Liver, rat, ring- and *N*-hydroxylation of 2-acetamidofluorene by a reconstituted cytochrome *P*-450 enzyme system from the microsomal fraction of (Lotlikar, P. D. & Zaleski, K.) 561–564
Liver, rat, role of glucocorticoids in the regulation of the biosynthesis and degradation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in, and kidney *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203
Liver, rat, role of intermediates in the β-oxidation of fatty acids by mitochondria from (Stanley, K. K. & Tubbs, P. K.) 77–88
Liver, rat, stabilization by tetracycline of the activity of tyrosine aminotransferase of, *in vitro* and *in vivo* (Hannah, R. & Sahib, M. K.) 329–333
Liver, rat, stimulation by elevated plasma concentrations of insulin of the transport of calcium ions by mitochondria from (Dorman, D. M., Barritt, G. J. & Bygrave, F. L.) 389–395
Liver, rat, subcellular localization of superoxide dismutase in (Peeters-Joris, C., Vandevoorde, A.-M. & Baudhuin, P.) 31–39
Liver, rat, sulphation of *p*-hydroxyphenylpyruvate and related compounds by cytosol from (Hext, P. M. & Rose, F. A.) 175–181
Liver, *Xenopus laevis*, male, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by oestradiol-17β of the biosynthesis of egg-yolk protein in (Tata, J. R. & Baker, B.) 345–355
Lucilia cuprina, *see* Blowfly
Lung fibroblasts, WI-38, human, cultured, biosynthesis of proline and hydroxyproline in (Shen, T.-F. & Strecker, H. J.) 453–461
Luteinizing hormone, *see* Luteotrophin
Luteotrophin, effects of inhibitors of protein biosynthesis on the stimulation by, of the production of testosterone by preparations of rat testis interstitial tissue and Leydig cells (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418
Lymphocytes, pig, stimulated, comparison of the effects of actinomycin D and of deprivation of zinc ions on the biosynthesis of ribonucleic acid by (Chesters, J. K.) 211–218
Lysophosphatidylethanolamine, intermolecular transacylation of phosphatidylethanolamine to form *N*-acylphosphatidylethanolamine and, by a *Butyrivibrio* sp. (Hazlewood, G. P. & Dawson, R. M. C.) 521–525
Lysosomes, liver, rat, inhibition by tetracycline of the degradation of tyrosine aminotransferase by (Hannah, R. & Sahib, M. K.) 329–333

Malate dehydrogenase, changes in the activities of, and other enzymes during culture of foetal rat liver explants (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273
Mammary gland, rat, lactating, metabolic interactions of glucose, acetoacetate and insulin in slices of (Williamson, D. H., McKeown, S. R. & Ilic, V.) 145–152
Mammary-gland tumours, rat, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by cytosol from human breast tumours and (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75
Membrane, inner, mitochondrial, liver, rat, foetal, positive-feedback control of the maturation of (Pollak, J. K.) 477–488
Membrane, plasma, *Paracoccus denitrificans* N.C.I.B. 8944, reversibility of the active transport of sulphate by membrane vesicles prepared from (Burnell, J. N., John, P. & Whatley, F. R.) 527–536
Membrane, plasma, tumour-KB-cell, human, iodination and fractionation of the glycoproteins of (Butters, T. D. & Hughes, R. C.) 59–69
Membranes, kidney-tubule, rat, sensitivity of the activity of adenylate cyclase in, to calcitonin (Loreau, N., Lepreux, C. & Ardaillou, R.) 305–314
3-Mercaptopicolinate, effects of, on gluconeogenesis and the concentrations of gluconeogenic metabolites in isolated perfused rat liver (Goodman, M. N.) 137–139
Methanol, autotrophic growth of *Micrococcus denitrificans* N.C.I.B. 8944 on (Cox, R. B. & Quayle, J. R.) 569–571
3-Methylcholanthrene, induction by, of the activities of glutathione *S*-transferases in rat kidney (Clifton, G., Kaplowitz, N., Wallin, J. D. & Kuhlenkamp, J.) 259–262
3-Methylcholanthrene, ring- and *N*-hydroxylation of 2-acetamidofluorene by a reconstituted cytochrome *P*-450 enzyme system from rat liver microsomal fraction after pretreatment of the animals with (Lotlikar, P. D. & Zaleski, K.) 561–564
Micrococcus denitrificans N.C.I.B. 8944, autotrophic growth of, on methanol (Cox, R. B. & Quayle, J. R.) 569–571
Micrococcus denitrificans, *see also Paracoccus denitrificans*
Microsomal fraction, liver, rat, ring- and *N*-hydroxylation of 2-acetamidofluorene by a reconstituted cytochrome *P*-450 enzyme system from (Lotlikar, P. D. & Zaleski, K.) 561–564
Microsomal fraction, properties of 5-aminolaevulinate synthetase and its relationship to the activity of mixed-function oxidases of, in the southern armyworm (Brattsten, L. B. & Wilkinson, C. F.) 97–104
Mitochondria, brain and liver, rat, comparison of the regulation of the activity of pyruvate dehydrogenase in (Jope, R. & Blass, J. P.) 397–403

Mitochondria, *Euglena gracilis*, oxidative phosphorylation during the metabolism of glycollate in (Collins, N., Brown, R. H. & Merrett, M. J.) 373–377
Mitochondria, liver, rat, determination of initial rates of pyruvate transport in, by an 'inhibitor-stop' technique (Titheradge, M. A. & Coore, H. G.) 553–556
Mitochondria, liver, rat, foetal, positive-feedback control of the maturation of the inner membrane of (Pollak, J. K.) 477–488
Mitochondria, liver, rat, localization of superoxide dismutase in, and cytosol (Peeters-Joris, C., Vandevoorde, A.-M. & Baudhuin, P.) 31–39
Mitochondria, liver, rat, role of intermediates in the β-oxidation of fatty acids by (Stanley, K. K. & Tubbs, P. K.) 77–88
Mitochondria, liver, rat, stimulation by elevated concentrations of insulin of the transport of calcium ions by (Dorman, D. M., Barritt, G. J. & Bygrave, F. L.) 389–395
Mixed-function oxidases, *see* Oxidases, mixed-function
Müllerian duct, chick-embyro, isolation and characterization of an oestrogen receptor protein from (Teng, C. S. & Teng, C. T.) 183–190
Müllerian duct, chick-embryo, ontogeny of the cytoplasmic oestrogen receptor protein of (Teng, C. S. & Teng, C. T.) 191–194
Muscle cells, heart, rat, cultured, stimulation by glucose of the biosynthesis of protein in (David, M. & Avi-Dor, Y.) 405–411
Muscle, effects of ammonium, inorganic phosphate and potassium ions on the activity of phosphofructokinase of nervous tissue and, from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122
Muscle, skeletal, rat, rates of the biosynthesis and degradation of protein during growth of (Millward, D. J., Garlick, P. J., Stewart, R. J. C., Nnanyelugo, D. O. & Waterlow, J. C.) 235–243

Nervous tissue, activities of enzymes associated with the tricarboxylic acid cycle in, from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111
Nervous tissue, effects of ammonium, inorganic phosphate and potassium ions on the activity of phosphofructokinase of muscle and, from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122
Nicotiana tabacum, *see* Tobacco
Nicotinamide–adenine dinucleotide (phosphate), ability of adenosine triphosphate to drive the transport of amino acids but not the energy-dependent transhydrogenation of, in *Salmonella typhimurium* strain HfrA (Kay, W. W. & Bragg, P. D.) 21–29
Nicotinamide–adenine dinucleotide, reduced, regulation by adenine nucleotides, 2-oxoglutarate and, of the activity of citrate synthase in various methylotrophic bacteria (Colby, J. & Zatman, L. J.) 141–144
Nuclear ribonucleic acid, *see* Ribonucleic acid, nuclear

Oestradiol-17β, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by, of the biosynthesis of egg-yolk protein in male *Xenopus laevis* liver (Tata, J. R. & Baker, B.) 345–355
Oestradiol-17β, influence of anti-oestrogens on the specific binding *in vitro* of, by cytosol from rat mammary-gland tumours and human breast tumours (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75
Oestradiol-17β receptor protein, cytoplasmic, ontogeny of, in chick-embryo Müllerian duct (Teng, C. S. & Teng, C. T.) 191–194
Oestradiol-17β receptor protein, isolation and characterization of, from chick-embryo Müllerian duct (Teng, C. S. & Teng, C. T.) 183–190
Oestrogen receptor protein, cytoplasmic, ontogeny of, in chick-embryo Müllerian duct (Teng, C. S. & Teng, C. T.) 191–194
Oestrogen receptor protein, isolation and characterization of, from chick-embryo Müllerian duct (Teng, C. S. & Teng, C. T.) 183–190
Ornithine decarboxylase, relationship between the activity of, and the incorporation of 2-deoxy-5-iodouridine in rat ventral and dorsolateral prostate glands (Fuller, D. J. M., Donaldson, L. J. & Thomas, G. H.) 557–559
Ovary, pig, biosynthesis of progesterone by corpus luteum tissue from, during superfusion (Watson, J. & Wrigglesworth, P. M.) 301–304
Oxidases, mixed-function, microsomal, properties of 5-aminolaevulinate synthetase and its relationship to the activity of, in the southern armyworm (Brattsten, L. B. & Wilkinson, C. F.) 97–104
Oxidative phosphorylation, *see* Phosphorylation, oxidative
2,3-Oxidosqualene cyclase, activities of cycloartenol–*S*-adenosylmethionine methyltransferase and, in the cotyledon and axis tissues of germinating pea seedlings *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328
2-Oxo acids, biosynthesis of amino acids via, in cultures of mixed rumen micro-organisms (Sauer, F. D., Erfle, J. D. & Mahadevan, S.) 357–372
2-Oxoglutarate, regulation by reduced nicotinamide–adenine dinucleotide, adenine nucleotides and, of the activity of citrate synthase in various methylotrophic bacteria (Colby, J. & Zatman, L. J.) 141–144
[$^{18,18}O_2$]Oxygen, use of, in a double-labelling study of the catabolism of haemoglobin to bilirubin in the rat (Brown, S. B. & King, R. F. G. J.) 565–567

Palmitate, role of intermediates in the β-oxidation of, and other fatty acids by rat liver mitochondria (Stanley, K. K. & Tubbs, P. K.) 77–88
Pancreas, rat, effects of calcium ionophores on the secretion of insulin and glucagon by islets of Langerhans isolated from (Ashby, J. P. & Speake, R. N.) 89–96
Paracoccus denitrificans N.C.I.B. 8944, reversibility of the active transport of sulphate by membrane vesicles prepared from the plasma membrane of (Burnell, J. N., John, P. & Whatley, F. R.) 527–536
Parathyroid hormone, sensitivity of the activity of adenylate cyclase in rat kidney-tubule membranes to calcitonin and (Loreau, N., Lepreux, C. & Ardaillou, R.) 305–314
Pea (*Pisum sativum*) seedlings, germinating, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase in the cotyledon and axis tissues of, *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328

Pectin, biosynthesis of, during the regeneration of the cell walls of plasmolysed tobacco-leaf cells (Boffey, S. A. & Northcote, D. H.) 433–440

Peroxisomes, liver, rat, absence of superoxide dismutase activity in (Peeters-Joris, C., Vandevoorde, A.-M. & Baudhuin, P.) 31–39

pH gradient, evidence for, as the driving force for the active transport of sulphate by membrane vesicles prepared from the plasma membrane of *Paracoccus denitrificans* N.C.I.B. 8944 (Burnell, J. N., John, P. & Whatley, F. R.) 527–536

Phenobarbital, induction by, of the activities of glutathione *S*-transferases in rat kidney (Clifton, G., Kaplowitz, N., Wallin, J. D. & Kuhlenkamp, J.) 259–262

Phenylalanine 4-hydroxylase, effects of environmental low pressure on the activities of tyrosine aminotransferase and, in rat liver (Namboodiri, M. A. A. & Ramasarma, T.) 263–268

Phosphatases, kidney, rat, properties and subcellular localization of, catalysing the hydrolysis of polyphosphoinositides (Cooper, P. H. & Hawthorne, J. N.) 537–551

Phosphate, inorganic, effects of ammonium ions, potassium ions and, on the activity of phosphofructokinase of muscle and nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122

Phosphatidylethanolamine, intermolecular transacylation of, to form *N*-acylphosphatidylethanolamine and lysophosphatidylethanolamine by a *Butyrivibrio* sp. (Hazlewood, G. P. & Dawson, R. M. C.) 521–525

Phosphoenolpyruvate carboxykinase (guanosine triphosphate), role of glucocorticoids in the regulation of the biosynthesis and degradation of, in rat liver and kidney *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203

Phosphoenolpyruvate carboxykinase (guanosine triphosphate), stimulation of the activity of, in perfused rat liver by low concentrations of glucose in the perfusion medium (Moreno, F. J., Sánchez-Urrutia, L., Medina, J. M., Sánchez-Medina, F. & Mayor, F.) 51–58

Phosphofructokinase, effects of ammonium, inorganic phosphate and potassium ions on the activity of, of muscle and nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122

Phosphomonoesterase, *see* Phosphatase

Phosphorylation, oxidative, during the metabolism of glycollate in *Euglena gracilis* mitochondria (Collins, N., Brown, R. H. & Merrett, M. J.) 373–377

Pisum sativum, *see* Pea

Plasma albumin, *see* Albumin, plasma

Plasma membrane, *see* Membrane, plasma

Plasma, rat, stimulation by elevated concentrations of insulin in, of the transport of calcium ions by rat liver mitochondria (Dorman, D. M., Barritt, G. J. & Bygrave, F. L.) 389–395

Platelets, rat, specific binding sites for 5-hydroxytryptamine on (Drummond, A. H. & Gordon, J. L.) 129–132

Polyphosphoinositides, properties and subcellular localization of the phosphatases catalysing the hydrolysis of, in rat kidney (Cooper, P. H. & Hawthorne, J. N.) 537–551

Polysulphanes, role of, in the control of the activity of 5-aminolaevulinate synthetase in *Rhodopseudomonas spheroides* N.C.I.B. 8253 (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257

Porphyria, activity of liver ribosomes in mice with (Del Favero, A., Gamulin, S., Gray, C. H. & Norman, M. R.) 573–576

Potassium ions, device for the rapid separation of isolated hepatocytes or similar tissue fragments for determination of the concentrations of, and other cell constituents (Hems, R., Lund, P. & Krebs, H. A.) 47–50

Potassium ions, effects of ammonium ions, inorganic phosphate and, on the activity of phosphofructokinase of muscle and nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 113–122

Pressure, low, environmental, effects of, on the activities of tyrosine aminotransferase and phenylalanine 4-hydroxylase in rat liver (Namboodiri, M. A. A. & Ramasarma, T.) 263–268

Prodenia eridania, *see* Southern armyworm

Progesterone, biosynthesis of, by pig corpus luteum tissue during superfusion (Watson, J. & Wrigglesworth, P. M.) 301–304

Proline, biosynthesis of, and hydroxyproline in cultured human WI-38 lung fibroblasts (Shen, T.-F. & Strecker, H. J.) 453–461

Prostate glands, ventral and dorsolateral, rat, relationship between the activity of ornithine decarboxylase and the incorporation of 2-deoxy-5-iodouridine in (Fuller, D. J. M., Donaldson, L. J. & Thomas, G. H.) 557–559

Protein, activity of liver ribosomes for the biosynthesis of, in porphyric mice (Del Favero, A., Gamulin, S., Gray, C. H. & Norman, M. R.) 573–576

Protein, analysis of the amino acids attached to rabbit liver transfer ribonucleic acid *in vivo* and its relevance to the biosynthesis of (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432

Protein components, effect of diet on the release of the triacylglycerol components and, of very-low-density lipoproteins by perfused rat liver (Petersburg, S. J., Madeley, A. & Robinson, D. S.) 315–321

Protein, effects of inhibitors *in vivo* on the biosynthesis of, and on the amino acid pool in the blowfly *Lucilia cuprina* (Campbell, A. J. & Birt, L. M.) 227–234

Protein, effects of inhibitors of the biosynthesis of, on the production of testosterone by preparations of rat testis interstitial tissue and of Leydig cells (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418

Protein, egg-yolk, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by oestradiol-17β of the biosynthesis of, in male *Xenopus laevis* liver (Tata, J. R. & Baker, B.) 345–355

Protein, oestrogen receptor, cytoplasmic, ontogeny of, in chick-embyro Müllerian duct (Teng, C. S. & Teng, C. T.) 191–194

Protein, oestrogen receptor, isolation and characterization of, from chick-embyro Müllerian duct (Teng, C. S. & Teng, C. T.) 183–190
Protein, rates of the biosynthesis and degradation of, during the growth of rat skeletal muscle (Millward, D. J., Garlick, P. J., Stewart, R. J. C., Nnanyelugo, D. O. & Waterlow, J. C.) 235–243
Protein, stimulation by glucose of the biosynthesis of, in cultured rat heart-muscle cells (David, M. & Avi-Dor, Y.) 405–411
Proteins, ribosomal, activities of genes coding for ribosomal ribonucleic acid and, in *Escherichia coli* B/r (Bremer, H. & Dennis, P. P.) 469–475
Proteins, ribosomal, regulation of the biosynthesis of, in *Escherichia coli* A.T.C.C. 12632 during deprivation of pyrimidines (Beatty, B. G., Mak, W. W.-N. & Wong, J. T.-F.) 463–468
Pseudomonas 3A2, regulation by reduced nicotinamide–adenine dinucleotide, adenine nucleotides and 2-oxoglutarate of the activity of citrate synthase in, and other methylotrophs (Colby, J. & Zatman, L. J.) 141–144
Purine nucleotide cycle, characteristics of the deamination of aspartate by, in rat liver cytosol fraction (Moss, K. M. & McGivan, J. D.) 275–283
Pyrimidines, regulation of the biosynthesis of ribosomal proteins in *Escherichia coli* A.T.C.C. 12632 during deprivation of (Beatty, B. G., Mak, W. W.-N. & Wong, J. T.-F.) 463–468
Pyruvate dehydrogenase, comparison of the regulation of the activity of, in mitochondria from rat brain and liver (Jope, R. & Blass, J. P.) 397–403
Pyruvate, determination of initial rates of transport of, in rat liver mitochondria by an 'inhibitor-stop' technique (Titheradge, M. M. & Coore, H. G.) 553–556

Respiration, betaine-induced stimulation of, at high osmolarities in a halotolerant bacterium (Shkedy-Vinkler, C. & Avi-Dor, Y.) 219–226
Respiration, positive-feedback control of the development of, by rat liver mitochondria at parturition (Pollak, J. K.) 477–488
Retina, chick, uptake of glutamate by (Tunnicliff, G.) 297–299
Rhodopseudomonas spheroides N.C.I.B. 8253, role of trisulphides in the control of the activity of 5-aminolaevulinate synthetase in (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257
Ribonucleic acid, comparison of the effects of actinomycin D and of deprivation of zinc ions on the biosynthesis of, by stimulated pig lymphocytes (Chesters, J. K.) 211–218
Ribonucleic acid, effect of ethionine on the biosynthesis of, in rat liver (Swann, P. F., Peacock, A. C. & Bunting, S.) 335–344
Ribonucleic acid, nuclear, heterogeneous, polyadenylate-rich, differential subnuclear distribution of, during induction by oestradiol-17β of the biosynthesis of egg-yolk protein in male *Xenopus laevis* liver (Tata, J. R. & Baker, B.) 345–355
Ribonucleic acid polymerase II, deoxyribonucleic acid-dependent, liver, rat, early enhancement by the administration of tri-iodothyronine of the activity of (Jothy, S., Bilodeau, J.-L., Champsaur, H. & Simpkins, H.) 133–135
Ribonucleic acid polymerase, free, regulatory state of the genes controlling the synthesis of ribosomes and physiological changes in the concentration of, in *Escherichia coli* B/r A.T.C.C. 12407 (Bremer, H. & Dalbow, D. G.) 9–12
Ribonucleic acid, ribosomal, activities of genes coding for, and ribosomal proteins in *Escherichia coli* B/r (Bremer, H. & Dennis, P. P.) 469–475
Ribonucleic acid, ribosomal, effect of ethionine on the maturation of (Swann, P. F., Peacock, A. C. & Bunting, S.) 335–344
Ribonucleic acid, transfer, liver, rabbit, analysis of the amino acids attached to, *in vivo* (Butler, M., Darbre, A. & Arnstein, H. R. V.) 419–432
Ribosomal proteins, activities of genes coding for ribosomal ribonucleic acid and, in *Escherichia coli* B/r (Bremer, H. & Dennis, P. P.) 469–475
Ribosomal proteins, regulation of the biosynthesis of, in *Escherichia coli* A.T.C.C. 12632 during deprivation of pyrimidines (Beatty, B. G., Mak, W. W.-N. & Wong, J. T.-F.) 463–468
Ribosomal ribonucleic acid, *see* Ribonucleic acid, ribosomal
Ribosomes, liver, mouse, activity of, in animals with porphyria (Del Favero, A., Gamulin, S., Gray, C. H. & Norman, M. R.) 573–576
Ribosomes, regulatory state of the genes controlling the synthesis of, and physiological changes in the concentration of free ribonucleic acid polymerase in *Escherichia coli* B/r A.T.C.C. 12407 (Bremer, H. & Dalbow, D. G.) 9–12
Ribosomes, relationship between the rate of constitutive synthesis of, and the rate of biosynthesis of β-galactosidase in *Escherichia coli* B/r A.T.C.C. 12407 (Dalbow, D. G. & Bremer, H.) 1–8
Ribulose diphosphate carboxylase, activity of, in *Micrococcus denitrificans* N.C.I.B. 8944 during autotrophic growth on methanol (Cox, R. B. & Quayle, J. R.) 569–571
Rumen micro-organisms, mixed, biosynthesis of amino acids in cultures of (Sauer, F. D., Erfle, J. D. & Mahadevan, S.) 357–372

Salmonella typhimurium strain HfrA, ability of adenosine triphosphate to drive the transport of amino acids but not the energy-dependent transhydrogenation of nicotinamide–adenine dinucleotide (phosphate) in (Kay, W. W. & Bragg, P. D.) 21–29
Seedlings, pea, germinating, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase in the cotyledon and axis tissues of, *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328
Serotinin, *see* 5-Hydroxytryptamine
Serum albumin, *see* Albumin, plasma
Skeletal muscle, *see* Muscle, skeletal
Southern armyworm (*Spodoptera eridania*), properties of 5-aminolaevulinate synthetase and its relationship to the activity of microsomal mixed-function oxidases in (Brattsten, L. B. & Wilkinson, C. F.) 97–104

Spodoptera eridania, *see* Southern armyworm
Starvation, biosynthesis of glycogen in perfused rat liver during streptozotocin-induced diabetes and (Whitton, P. D. & Hems, D. A.) 153–165
Steroid hormones, glucocorticoid, role of, in the regulation of the biosynthesis and degradation of phosphoenolpyruvate carboxykinase (guanosine triphosphate) in rat liver and kidney *in vivo* (Gunn, J. M., Hanson, R. W., Meyuhas, O., Reshef, L. & Ballard, F. J.) 195–203
Steroidogenesis, effects of inhibitors of protein biosynthesis on, by preparations of rat testis interstitial tissue and Leydig cells (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418
Sterols, activities of 2,3-oxidosqualene cyclase and cycloartenol–*S*-adenosylmethionine methyltransferase involved in the biosynthesis of, in the cotyledon and axis tissues of germinating pea seedlings *in vivo* (Fang, T.-Y. & Baisted, D. J.) 323–328
Streptozotocin-diabetes, *see* Diabetes, streptozotocin-
Sulphate, inorganic, reversibility of the active transport of, by membrane vesicles prepared from the plasma membrane of *Paracoccus denitrificans* N.C.I.B. 8944 (Burnell, J. N., John, P. & Whatley, F. R.) 527–536
Supernatant fraction, *see* Cytosol
Superoxide dismutase, subcellular localization of, in rat liver (Peeters-Joris, C., Vandevoorde, A.-M. & Baudhuin, P.) 31–39

Testis, rat, effects of inhibitors of protein biosynthesis on the production of testosterone by preparations of interstitial tissue from, and of Leydig cells (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418
Testosterone, effects of inhibitors of protein biosynthesis on the production of, by preparations of rat testis interstitial tissue and of Leydig cells (Cooke, B. A., Janszen, F. H. A., Clotscher, W. F. & van der Molen, H. J.) 413–418
Tetracycline, stabilization by, of the activity of rat liver tyrosine aminotransferase *in vitro* and *in vivo* (Hannah, R. & Sahib, M. K.) 329–333
Thiamin, conversion of threonine into other amino acids in rat brain during deficiency of (Gaitonde, M. K.) 285–295
Thiol groups, evidence for the involvement of, in the active transport of sulphate by membrane vesicles prepared from the plasma membrane of *Paracoccus denitrificans* N.C.I.B. 8944 (Burnell, J. N., John, P. & Whatley, F. R.) 527–536
Threonine, conversion of, into other amino acids in rat brain during deficiency of (Gaitonde, M. K.) 285–295
Thyroxine, conversion of, into tri-iodothyronine by rat liver homogenate (Visser, T. J., van der Does-Tobé, I., Docter, R. & Hennemann, G.) 489–493
Tobacco (*Nicotiana tabacum*)-leaf cells, plasmolysed, biosynthesis of pectin during the regeneration of the cell walls of (Boffey, S. A. & Northcote, D. H.) 433–440
Transfer ribonucleic acid, *see* Ribonucleic acid, transfer
Triacylglycerol components, effect of diet on the release of the protein components and, of very-low-density lipoproteins by perfused rat liver (Petersburg, S. J., Madeley, A. & Robinson, D. S.) 315–321
Tricarboxylic acid cycle, activities of enzymes associated with, in nervous tissue from various vertebrate and invertebrate species (Sugden, P. H. & Newsholme, E. A.) 105–111
Triglyceride, *see* Triacylglycerol
Tri-iodothyronine, conversion of thyroxine into, by rat liver homogenate (Visser, T. J., van der Does-Tobé, I., Docter, R. & Hennemann, G.) 489–493
Tri-iodothyronine, early enhancement by the administration of, of the activity of deoxyribonucleic acid-dependent ribonucleic acid polymerase in rat liver (Jothy, S., Bilodeau, J.-L., Champsaur, H. & Simpkins, H.) 133–135
Triphosphoinositide phosphatase, kidney, rat, properties and subcellular localization of, and diphosphoinositide phosphatase (Cooper, P. H. & Hawthorne, J. N.) 537–551
Trisulphides, role of, in the control of the activity of 5-aminolaevulinate synthetase in *Rhodopseudomonas spheroides* N.C.I.B. 8253 (Sandy, J. D., Davies, R. C. & Neuberger, A.) 245–257
Tryptophan pyrrolase, effects of the administration of haematin and of 5-aminolaevulinate and comparison of the substrate and hormonal mechanisms for the regulation of the activity of, by its cofactor haem in rat liver (Badawy, A. A.-B. & Evans, M.) 511–520
Tumour KB cells, human, iodination and fractionation of the glycoproteins of the plasma membrane of (Butters, T. D. & Hughes, R. C.) 59–69
Tumours, breast, human, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by cytosol from (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75
Tumours, mammary-gland, rat, influence of anti-oestrogens on the specific binding *in vitro* of oestradiol by cytosol from (Powell-Jones, W., Jenner, D. A., Blamey, R. W., Davies, P. & Griffiths, K.) 71–75
Tyrosine aminotransferase, effects of environmental low pressure on the activities of phenylalanine 4-hydroxylase and, in rat liver (Namboodiri, M. A. A. & Ramasarma, T.) 263–268
Tyrosine aminotransferase, induction of the activity of, in cultured foetal rat liver explants (MacDonnell, P. C., Ryder, E., Delvalle, J. A. & Greengard, O.) 269–273
Tyrosine aminotransferase, liver, rat, stabilization by tetracycline of the activity of, *in vitro* and *in vivo* (Hannah, R. & Sahib, M. K.) 329–333

Urea, mathematical modelling of the dynamics of the incorporation of radioactivity from [^{14}C]carbonate into, and the guanidine moiety of arginine residues of plasma albumin in isolated perfused rat liver (Tavill, A. S., Nadkarni, D., Metcalfe, J., Black, E., Hoffenberg, R. & Carson, E. R.) 495–509

Uridine, regulation of the biosynthesis of ribosomal proteins in *Escherichia coli* A.T.C.C. 12632 during deprivation of (Beatty, B. G., Mak, W. W.-N. & Wong, J. T.-F.) 463–468

Vitamin B_1, *see* Thiamin

Vitellogenin, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by oestradiol-17β of the biosynthesis of, in male *Xenopus laevis* liver (Tata, J. R. & Baker, B.) 345–355

Wall, cell, *see* Cell wall

Xenopus laevis, male, differential subnuclear distribution of polyadenylate-rich ribonucleic acid during induction by oestradiol-17β of the biosynthesis of egg-yolk protein in the liver of (Tata, J. R. & Baker, B.) 345–355

Zinc ions, comparison of the effects of actinomycin D and of deprivation of, on the biosynthesis of ribonucleic acid by stimulated pig lymphocytes (Chesters, J. K.) 211–218